

WM-1 STAGING AND MATERIALS SITE MANAGEMENT

Refer to: ITD Standard Specifications, Sections 107.02, 107.11, 107.17.
ITD Standard Drawings P-1-D, P-3-E, P-5-A.



BMP Objectives

- ☐ Perimeter Control
- ☐ Slope Protection
- ☒ Borrow and Stockpiles
- ☐ Drainage Areas
- ☐ Sediment Trapping
- ☐ Stream Protection
- ☒ Temporary Stabilizing
- ☐ Permanent Stabilizing

Definition and Purpose

Staging and storage areas within or adjacent to construction sites will be located, constructed, and maintained so that no contaminated stormwater or dust is discharged from the site.

- Preventative and control measures may include diverting non-contaminated runoff, as well as collecting, conveying, impounding, storing, treating, and containing contaminated stormwater within or adjacent to construction sites. Measures that are more significant may require covering or containing hazardous materials or washing contaminated equipment.
- A wash station may be required to prevent transporting noxious weeds and contaminated soils from a contaminated site to an uncontaminated site or road surface. An excavated, contained area or similar space may be needed to capture material from leaks, spills or wash-down water.
- Additionally, enclosures or covers over equipment, material sites, or hazardous material storage areas may be needed to prevent stormwater from coming into contact with the equipment or materials.
- Preventative measures to control dust may also need to be employed.

Appropriate Applications

Various control measures include:

- **Stormwater conveyances**, such as channels, ditches, dikes, berms, drains, gutters, or sediment traps that can be constructed or lined with different materials such as concrete, asphalt, aggregate, riprap, or geosynthetics.
- **Dikes, berms, ditches, or channels** to block or divert runoff from entering a storage or sensitive area.

- **Grading or paving an area** to control runoff.
- **Equipment wash station(s)** to contain and dispose of mud, dust, and noxious weeds that otherwise would be transported onto uncontaminated sites or road surfaces.
- **Containment dikes, berms, curbing, collection basins, sumps, or drip pans** to capture and dispose of chemical or hazardous material leaks or spills.
- **Enclosures, covers, or soil binders** to protect staging and maintenance areas and materials such as topsoil, waste stockpiles, aggregate, sand, salts, liquids, solids, compost, or hazardous materials from stormwater contamination and movement due to wind or runoff.

Limitations

- Stormwater conveyance systems may concentrate runoff and require a high degree of maintenance. They may be expensive to install, and space requirements may limit their effectiveness or practicality.
- Dikes or berms may not be suitable for large drainage areas. In addition, dikes, berms, curbs, collection basins, sumps, and liners used for leak and spill containment require constant maintenance to ensure proper operation.
- Graded or paved areas will increase runoff velocity and concentration and require special attention during heavy precipitation.
- Wash stations generate pollutants that must be contained and disposed of properly. Discharge of wash water into waters of the U.S. requires specific treatment of the discharge. Sediments will need to be removed and disposed of properly.
- Lack of understanding and poor assessment of the potential problems associated with handling and disposing hazardous materials may result in contamination of soils, or runoff and worker safety may be jeopardized.
- Covering exposed materials may not adequately protect the materials from coming in contact with stormwater. The cover or enclosure that is built or installed over certain activities or materials may pose health or safety problems.

Design Parameters

- Install conveyance systems when constructing the site or facility. Utilize grades of existing drainage patterns so that channels, dikes, berms, and sediment traps can be constructed prior to occupancy of the site.
- Consider the amount and velocity of a typical runoff. Construct dikes, berms, ditches, channels, and sediment traps of sufficient size, depth, or height to handle anticipated runoff.
- Incorporate graded or paved areas as control and containment measures to direct runoff to the treatment facilities.
- Curbs installed around material storage locations should consider using collection basins, sumps, and pumps to remove any spilled material.

- Wash stations should be installed in isolated areas and shall be at least 300 feet from streams and wetlands, and at least 492 feet from private or public wells.
- Design leak and spill containment sites large enough to hold an amount equal to 110 percent of the storage tank capacity at the particular site. Materials used to construct the dike should be of sufficient quality and strength to safely hold any spilled material.
- Isolate hazardous material sites, for either waste or storage, out of the way of main traffic areas. If possible, provide for cover or a secured enclosure. Address leaks and spill containment and disposal.
- When installing a cover or enclosure, evaluate the strength and longevity of the covering materials, as well as compatibility and safety with the materials being enclosed or covered. Allow for adequate access for loading, handling, and transfer. Allow for ventilation.

Construction Guidelines

- The Contractor shall construct staging and storage areas prior to project construction. Construction site preparation is essential to prevent erosion and contamination of all on- and off-site water systems.
- The Contractor shall apply specific construction methods to the type of stormwater conveyance system being used and follow the Standard Specifications closely.
- The Contractor shall install dikes, berms, channels, ditches, gutters, and sediment traps before construction activities begin. Graded and paved areas should receive the same consideration in site preparation.
- Wastewater shall be collected or directed from vehicle wash stations to a containment or treatment system. Evaporation ponds with no outlets are sufficient where contaminants is not a concern. An excavated area lined with an impermeable liner may be required with pollutants such as oil, grease, fuel, asphalt, etc.
- On ITD-controlled sources, vehicle washing stations may consist of a drive-through tire wash only, unless otherwise specified. If noxious weeds are present, an extensive vehicle and undercarriage wash will be required.
- Specific construction requirements shall be used for certain hazardous materials storage and leak/spill containment facilities.
- Special care shall be given to avoid contamination of stormwater with outside storage materials by preventing water or precipitation from coming in contact with the materials. Materials shall be stored inside an enclosed/covered facility or by covering the material with protective roofing or temporary flexible covering. Materials shall be contained by installing liners, curbs, or berms around the material.
- Roofs, sheds, or buildings shall be constructed according to plans and drawings in accordance with current building codes and departmental standards. Securely anchor and, if necessary, ventilate temporary coverings or plastic sheets. Water shall not be allowed to penetrate onto the material, and the material shall be secured and strong enough to withstand strong wind conditions.

Regulatory Notes

- Wastewater used to wash vehicles must be specifically identified in the SWPPP. Agencies that may regulate wastewater are EPA, IDEQ, health districts, and cities. ITD personnel shall contact the appropriate agency to see if they have a particular interest or concern with the handling and disposal of the wastewater. For Contractor-furnished sources, the Contractor shall contact the appropriate agency to see if they have a particular interest or concern with the handling and disposal of the wastewater.
- Leak and spill containment may require local authorization and inspection. ITD personnel shall consult OSHA and local safety codes or standards for specific requirements. Explosion-proof pumping equipment and controls or other appropriate equipment may be required. For Contractor-furnished sources, the Contractor shall consult OSHA and local safety codes or standards for specific requirements.
- In the event of a reported spill (40 CFR, Section 302.5), the Contractor shall notify the ITD Hazardous Materials Coordinator who shall notify the National Response Center hotline at (800) 424-8802 to report the type of material spilled and quantity. If the ITD Hazardous Materials Coordinator is not available, State Communications shall be notified.
- If runoff is discharged into an off-site sewer or treatment facility, the Contractor shall consult with the operator of the facility to see if there are any necessary special requirements, restrictions, or permits.
- Noncompliance with regulations may result in regulatory enforcement, including fines, increased liability, or shutdown of the operation.
- No fill material, including building material, shall be discharged into waters of the United States, unless authorized by the Clean Water Act (CWA) and Section 404 permit.
- Local authorities may have stricter requirements. These authorities shall be checked with for area/site specific concerns.

Maintenance and Inspection

- Conduct inspections as required by the NPDES permit or contract specifications.
- Repair eroded unpaved graded areas to ensure they are draining properly and that the discharge is not clogged. Remove sediments from the sediment traps and dispose of properly.
- Clean up and properly dispose of any mud or sediments that may be transported off-site from wash stations.
- Repair and stabilize dikes and curbs immediately. Use drip pans if necessary, and provide spill and containment kits for immediate reaction.
- Repair or replace structural and flexible coverings, such as tarpaulins, as needed.
- Remove debris that may clog the system and repair any damage. Pick up all garbage and waste material, and dispose of it properly.

- Assign a limited number of people to be responsible for hazardous materials and keep the inventory up-to-date. Label all containers with proper identification of the contents. Keep Material Safety Data Sheets (MSDSs) and spill and containment kits (if required) at the site. Review safety procedures for each hazardous material stored on-site.